CLAIMS

What is claimed is:

Sub a1

1. In a firewall device having a plurality of communication interfaces, a firewall system comprising:

a) a firewall core connected to each said communication interface; and

b) at least one inspection module coupled for communication to said firewall core, said inspection module configured to provide protocol inspection of data packets to said firewall core, said firewall core configured to receive data packets from said interfaces and communicate said packets to said inspection module for inspection, said inspection module is further configured to be installed during the operation of the firewall system.

2. The firewall system of claim1, wherein said inspection module is installed into a memory space monitored by said firewall core.

3. The firewall system of claim 1, wherein said inspection module further comprises callback functions, said functions communicated to said firewall core and providing communication between said firewall core and said inspection module.

4. The firewall system of claim 1, wherein said inspection module is further configured to indicate to said firewall core for which data packets said inspection module is configured to provide inspection.

5. The firewall system of claim 1, wherein said data packets intercepted by said firewall core further includes session information comprising address and port data, said firewall core further configured to map said session information to corresponding inspection modules.

6. In a firewall device having a plurality of communication interfaces, a firewall core configured to be coupled to at least one inspection module, said firewall core comprising:

a) a communication unit operatively coupled to the communication interfaces; and

b) a set of callback functions, retrieved from said inspection module, each said function providing communication between said firewall core and said inspection module.

7. The firewall core of claim 6, wherein said communication unit is further configured to intercept network data communicated via said network interfaces.

8. The firewall core of claim 7, further comprising a session mapping unit, said data packets intercepted by said firewall core further including session information comprising address and port data, said firewall core further configured to map said

session information to corresponding inspection modules into a session mapping and store said session mapping into said session mapping unit.

9. The firewall core of claim 6, wherein said communication unit is further configured to communicate packets between said communication interfaces and said inspection module for inspection.

10. In a firewall device having a plurality of communication interfaces and a firewall core coupled to the communication interfaces, an inspection module configured to couple with the firewall core, said inspection module comprising:

a) an inspection unit configured to inspect and authorize data packets; and

b) a function table having a set of callback functions each said function providing communication between said firewall core and said inspection module.

11. The inspection module of claim 10, where in said inspection unit is further configured to be installed during the operation of the firewall core.

12. The firewall system of claim10, wherein said inspection module is installed into a memory space monitored by said firewall core.

13. The firewall system of claim 1, wherein said inspection module is further configured to indicate to said firewall core for which data packets said inspection module is configured to provide inspection.

14. The inspection module of claim 10, where in said inspection unit is further configured to receive and inspect packets communicated from the firewall core.

15. In a firewall device having a firewall system including a firewall core, a method for adding protocol knowledge to the firewall system during runtime comprising:

a) loading an inspection module comprising new protocol inspection knowledge and a function table having a set of callback functions;

b) notifying the firewall core of said inspection module; and

c) communicating said set of callback functions to said firewall core.

16. The method of claim 15, further comprising enabling said inspection module, prior to communicating said set of callback function to said firewall core.

17. The method of claim 15 further comprising inspecting of packets by said inspection module, said packets communicated from the firewall core to said inspection module.

18. The method of claim 15 wherein said notifying the firewall core comprises loading said inspection module into a memory space monitored by the firewall core.

19. The method of claim 15 wherein said notifying the firewall core comprises transmitting a signal to the firewall core to indicate the installation of said inspection module.

20. The method of claim 15, further comprising indicating by said inspection module for which data packets said inspection module provides inspection.

21. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for adding protocol knowledge to a firewall system during runtime comprising, said firewall system including a firewall core, said method comprising:

a) loading an inspection module comprising new protocol inspection knowledge and a function table having a set of callback functions;
b) notifying the firewall core of said inspection module; and
c) communicating said set of callback functions to said firewall core.

22. The program storage device of claim 21, said method further comprising enabling said inspection module, prior to communicating said set of callback function to said firewall core.

23. The program storage device of claim 21, said method further comprising inspecting of packets by said inspection module, said packets communicated from the firewall core to said inspection module.

24. The program storage device of claim 21, wherein said notifying the firewall core comprises loading said inspection module into a memory space monitored by the firewall core.

25. The program storage device of claim 21, wherein said notifying the firewall core comprises transmitting a signal to the firewall core to indicate the loading of said inspection module.

26. The program storage device of claim 21, said method further comprising indicating by said inspection module for which data packets said inspection module provides inspection.